Office of Facilities Coordination

Classroom Availability

Fall 2006
Question Raised by CBE/SWAT:

How many classrooms were available throughout the school week during F2006?
... I am writing at the behest of my department heads regarding classrooms.

• At a recent meeting ... [they] became quite animated about the availability of classrooms ...

• Many indicated ... classrooms were occasionally not available at any time.

• ... There is a sense that the process is uneven and

... proves quite frustrating for departments with few or no classrooms ...

• I know these are regular problems, and don’t have much of a solution

I think the classroom matter still constrains how we deliver instruction on campus

Charles A. Johnson
Dean and Professor of Political Science
College of Liberal Arts
12/6/2006
### Space by Room Type

<table>
<thead>
<tr>
<th>Space Category</th>
<th>TAMU* (asf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom (100)</td>
<td>339,183</td>
</tr>
<tr>
<td>Laboratory (200)</td>
<td>1,292,614</td>
</tr>
<tr>
<td><strong>Instructional</strong></td>
<td><strong>671,289</strong></td>
</tr>
<tr>
<td>Research</td>
<td>621,325</td>
</tr>
<tr>
<td>Office (300)</td>
<td>2,139,477</td>
</tr>
<tr>
<td>Study (400)</td>
<td>471,814</td>
</tr>
<tr>
<td>Special Use (500)</td>
<td>1,173,763</td>
</tr>
<tr>
<td>General Use (600)</td>
<td>1,027,838</td>
</tr>
<tr>
<td>Support (700)</td>
<td>3,321,638</td>
</tr>
<tr>
<td>Health Care (800)</td>
<td>123,145</td>
</tr>
<tr>
<td>Residential (900)</td>
<td>1,743,651</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>11,633,123</strong></td>
</tr>
</tbody>
</table>

* Includes Vet Med

**Source:** Office of Facilities Coordination
Classroom Space

Registrar
201 Rooms
75%

Non-Registrar
68 Rooms
25%

Room Capacity

Largest  463 seats
Average  68 seats
Smallest  15 seats

Source: Office of Facilities Coordination
Texas A&M University – College Station
THECB Evaluation
Fall 2006

Classroom & Teaching Lab Utilization

Classrooms
THECB Standard

Teaching Lab
THECB Standard

THECB Methodology
Change Reflected in 2003

Fall Semester

Fall Semester

0 5 10 15 20 25 30 35 40 45
Average Weekly Hours of Use

0 5 10 15 20 25 30 35 40 45
Average Weekly Hours of Use

Source: Office of Facilities Coordination
There were classrooms “Available” across the University for:

- 656 additional 3-contact-hour classes during the eight standard times MWF and the six standard times TR. (7.29 CtHrs/Classroom)
- 936 contact hours on individual days at standard times M-F 8-5 if scheduled around existing classes. (3.47 CtHrs/Classroom)
- Over 5700 contact hours during evening hours throughout the week, depending on how large a block of time was needed. (21.1 CtHrs/Classroom)
Issues to be Considered:

- How do we define “available”?
- How does department level control of classrooms affect availability?
- How does the location of the classrooms affect availability?
- How does the capacity of the classrooms affect availability?
Definitions of Terms:

Class Activity:
A Registrar scheduled course of study.

Contact Hour (CtHr):
50 minutes of class activity.

In Session:
A classroom is in session if any students are scheduled to be in that classroom for Registrar scheduled class activity.

Inactive:
A classroom that is not in session.

Passing Period:
A 20 min period of inactivity between classes designed to allow the ingress and egress of faculty and students.
Definitions of Terms (Cont.):

Start Time:
The point in time when class activity begins in a classroom.

Available:
A term to describe a classroom with a period of inactivity large enough to schedule class activity and its passing periods.

Usable:
A period of inactivity NOT large enough to schedule class activity and its passing periods.

Time Slots:
A term used to describe the predominant trend in scheduling across the university MWF or TR.
Assumptions:

- For the purposes of this report, “availability” is limited only by what class activity was scheduled in that classroom.
- The fact that a classroom was inactive (not in session) does not mean that it is available for class activity to be scheduled at that time.
- Since the vast majority of classes (before 5pm) are 50 min at a time on MWF and 75 min at a time on TR, for a classroom to be available, it has to be inactive for 70 minutes on MWF and 95 min on TR.
- For purposes of comparability across the university and throughout the week, “time slots” begin and end in the middle of the 20 min passing periods.
Limitations:

- Our report is of the 270 classrooms (Type 110) M-F 8am-10pm.
- It does not quantify availability in any other type of room. (2100 CtHrs of class activity occurred in rooms with room codes other than 110, 210, or 220).
- This Analysis uses the data reported to THECB in the CBM005 of Nov. 2006. Some of this information was not recorded until late October of 2006.
- There is no data about when or to what extent this information was available to schedulers when they were making scheduling decisions.
Limitations:

- There is no data about review sessions, study groups, student group activities, academic department activities or any other activities.
- There is no data about which of the registrar’s classrooms were reserved at what times by departments.
- There is no data about the condition of the classrooms, the level of technology/equipment in a classroom or how this limits what class activity can be scheduled in that classroom.
- There is no data about what classrooms were reserved for classes that did not make or about classes that may have changed classrooms.
# Table of Standard Class Times

## Main and West Campus

### MWF

<table>
<thead>
<tr>
<th>SLOT 1</th>
<th>SLOT 2</th>
<th>SLOT 3</th>
<th>SLOT 4</th>
<th>SLOT 5</th>
<th>SLOT 6</th>
<th>SLOT 7</th>
<th>SLOT 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Time</td>
<td>8:00 AM</td>
<td>9:10 AM</td>
<td>10:20 AM</td>
<td>11:30 AM</td>
<td>12:40 PM</td>
<td>1:50 PM</td>
<td>3:00 PM</td>
</tr>
<tr>
<td>End Time</td>
<td>8:50 AM</td>
<td>10:00 AM</td>
<td>11:10 AM</td>
<td>12:20 PM</td>
<td>1:30 PM</td>
<td>2:40 PM</td>
<td>3:50 PM</td>
</tr>
</tbody>
</table>

### TR

<table>
<thead>
<tr>
<th>SLOT 1</th>
<th>SLOT 2</th>
<th>SLOT 3</th>
<th>SLOT 4</th>
<th>SLOT 5</th>
<th>SLOT 6</th>
<th>SLOT 7</th>
<th>SLOT 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Time</td>
<td>8:00 AM</td>
<td>9:35 AM</td>
<td>11:10 AM</td>
<td>12:45 PM</td>
<td>2:20 PM</td>
<td>3:55 PM</td>
<td></td>
</tr>
<tr>
<td>End Time</td>
<td>9:15 AM</td>
<td>10:50 AM</td>
<td>12:25 PM</td>
<td>2:00 PM</td>
<td>3:35 PM</td>
<td>5:10 PM</td>
<td></td>
</tr>
</tbody>
</table>

## Bush (1607 Allen Building)

### MWF

<table>
<thead>
<tr>
<th>SLOT 1</th>
<th>SLOT 2</th>
<th>SLOT 3</th>
<th>SLOT 4</th>
<th>SLOT 5</th>
<th>SLOT 6</th>
<th>SLOT 7</th>
<th>SLOT 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Time</td>
<td>8:35 AM</td>
<td>9:45 AM</td>
<td>10:55 AM</td>
<td>12:05 PM</td>
<td>1:15 PM</td>
<td>2:25 PM</td>
<td>3:35 PM</td>
</tr>
</tbody>
</table>

### TR

<table>
<thead>
<tr>
<th>SLOT 1</th>
<th>SLOT 2</th>
<th>SLOT 3</th>
<th>SLOT 4</th>
<th>SLOT 5</th>
<th>SLOT 6</th>
<th>SLOT 7</th>
<th>SLOT 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Time</td>
<td>8:45 AM</td>
<td>10:20 AM</td>
<td>11:55 AM</td>
<td>1:30 PM</td>
<td>3:05 PM</td>
<td>4:40 PM</td>
<td></td>
</tr>
<tr>
<td>End Time</td>
<td>10:00 AM</td>
<td>11:35 AM</td>
<td>1:10 PM</td>
<td>2:45 PM</td>
<td>4:20 PM</td>
<td>5:55 PM</td>
<td></td>
</tr>
</tbody>
</table>
MWF - Classrooms Available (No Scheduled Class Conflicts) by Day and Time Slot

Time Slots Available to University for Mon Classes = 594
Time Slots Available to University for Wed Classes = 563
Time Slots Available to University for Fri Classes = 1045
Time Slots Available to University for MWF Classes = 456
Time Slots Available to Registrar for MWF Classes = 310

Graph 1
F2006

MWF Classrooms Available (No Scheduled Class Conflicts) by Major Organizational Unit and Time Slot

Graph 2
TR - Classrooms Available (No Scheduled Class Conflicts) by Day and Time Slot

Time Slots Available to University for Tues Classes = 234
Time Slots Available to University for Thurs Classes = 241
Time Slots Available to University for TR Classes = 200
Time Slots Available to Registrar for TR Classes = 115

Graph 3
TR Classrooms Available (No Scheduled Class Conflicts) by Major Organizational Unit and Time Slot

- Dean-Military Science
- Dean-Science
- Dean-Liberal Arts
- Dean-Geosciences
- Dean-Engineering
- Dean-Education
- Dean-Business Admin
- Dean-Bush School
- Dean-Architecture
- Dean-Agriculture
- Registrar

Graph 4
Example: Low Usage/Low Availability
Mon - Classrooms in Session with Start Times by 5 Min Intervals

Capacity Line

Monday in Session
Monday Start Times

Classrooms

Time of Day

Graph 6

Mon 8am - 10pm
1822.6 Contact Hours
6.75 CtHrs/Classroom
Mon - Classrooms in Session by 5 Min Intervals and Time Slot

- **Mon Classrooms In Session During Time Slot**: 594 Available CtHrs, 2.2 CtHrs/Classroom
- **5.91 CtHrs/Classroom**
- **1596.7 Contact Hours**
- **1.69 Hrs/Classroom**
- **455 Unusable Hours**

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**Graph 7**
MWF - Classrooms in Session by 5 Min Intervals

Between 8am - 10pm
Mon - 1822.6 CtHrs - 6.75 CtHrs/Classroom
Wed - 1839.3 CtHrs - 6.81 CtHrs/Classroom
Fri - 1156.1 CtHrs - 4.28 CtHrs/Classroom

Graph 8
Classrooms in Session M &or W &or F

Between 8am - 5pm
Mon - 1596.7 Cthrs - 5.91 Cthrs/Classroom
Wed - 1623.8 Cthrs - 6.01 Cthrs/Classroom
Fri - 1142.1 Cthrs - 4.23 Cthrs/Classroom
4362.6 Cthrs for 5112 Schedule Hrs Consumed
MWF - Classrooms in Session &or Unavailable

Between 8am - 10pm
Mon - 6.75 CtHrs/Classroom
Wed - 6.81 CtHrs/Classroom
Fri - 4.28 CtHrs/Classroom

Graph 10
F2006

TR - Classrooms in Session &or Unavailable

Capacity Line

Tuesday in Session
Thursday in Session
In Session T &or R
In Session T &or R or Unavailable to Registrar

Between 8am - 10pm
Tues - 8.09 CtHrs/Classroom
Thurs - 7.86 CtHrs/Classroom

Graph 11
Where are these Classrooms?
Where are the open Time Slots?

<table>
<thead>
<tr>
<th>Location</th>
<th>No. of Rooms</th>
<th>Total MWF Slots Open</th>
<th>Total TR Slots Open</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Corridor - Central</td>
<td>81</td>
<td>130</td>
<td>46</td>
</tr>
<tr>
<td>Academic Corridor - East</td>
<td>35</td>
<td>65</td>
<td>36</td>
</tr>
<tr>
<td>Bush Area</td>
<td>12</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>Engineering/Sciences Quadrant</td>
<td>86</td>
<td>123</td>
<td>57</td>
</tr>
<tr>
<td>Main Campus - South</td>
<td>11</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>West Campus</td>
<td>45</td>
<td>103</td>
<td>51</td>
</tr>
<tr>
<td>Grand Total</td>
<td>270</td>
<td>456</td>
<td>200</td>
</tr>
</tbody>
</table>
MWF - Classrooms Available (No Scheduled Class Conflicts) by Location and Time Slot

- West Campus
- Main Campus - South
- Engineering/Sciences Quadrant
- Bush Area
- Academic Corridor - East
- Academic Corridor - Central

Classrooms

Time Slot for University or Registrar

Slot 1 | Slot 2 | Slot 3 | Slot 4 | Slot 5 | Slot 6 | Slot 7 | Slot 8

Graph 12
TR - Classrooms Available (No Scheduled Class Conflicts) by Location and Time Slot
MWF - Classrooms Available (No Scheduled Class Conflicts) by Capacity and Time Slot

- < 251
- 141 to 250
- 121 to 140
- 101 to 120
- 081 to 100
- 061 to 080
- 041 to 060
- 021 to 040
- 015 to 020

Classrooms

Time Slot for University or Registrar
Available 100+ Capacity TR Time Slots

<table>
<thead>
<tr>
<th>Scheduling Major Org Unit</th>
<th>Count of Rooms</th>
<th>Average CtHrs/Wk</th>
<th>Total TR Slots Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dean-Architecture</td>
<td>1</td>
<td>26.80</td>
<td>6</td>
</tr>
<tr>
<td>Dean-Engineering</td>
<td>2</td>
<td>34.60</td>
<td>3</td>
</tr>
<tr>
<td>Registrar</td>
<td>48</td>
<td>38.65</td>
<td>10</td>
</tr>
<tr>
<td>Grand Total</td>
<td>51</td>
<td>38.25</td>
<td>19</td>
</tr>
</tbody>
</table>
There are further materials available:

- **Complete Hardcopy Report**
  - Scheduling Patterns: How differences in scheduling can adversely affect availability.
  - Bottleneck Times: How there are large capacity department classrooms available at peak times in the academic corridor.

- **Further Classroom Availability Reports**
  - Capacity, Proximity, and Percent Usage reports